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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,929	02/06/2002	Werner Blatz	4286	9845

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EXAMINER

LINNENKAMP, NICHOLAS L

ART UNIT	PAPER NUMBER
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2635

8

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,929

Applicant(s)

BLATZ, WERNER

Examiner

Nicholas L Linnenkamp

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,8 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8 and 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4, 5, and 7.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stippler in view of common knowledge in the art.

In reference to claim 1, Stippler teaches of a method for detecting a redirecting process (See Figure 4) where

- A first transmitting/receiving unit transmits an interrogation signal (First step of method, Transmit a challenge via first antenna at power level A)
- The received interrogation signal is measured by a second transmitting/receiving unit (Measure reception level X)
- The measured value of the amplitude is transmitted back in the reply signal (Transmit Response Including X)

Stippler does not specifically teach that the value of the *reply signal* is measured by the first transmitting and receiving unit and compared with the returned value.

Stippler teaches that a second challenge is transmitted via a second antenna at power level A, measured, and compared with returned value from the first challenge signal.

One skilled in the art can easily recognize that the reply signal of the claimed invention is transmitted from a second antenna at a power level A, measured and compared with the first challenge signal.

It would have been obvious to one skilled in the art at the time of invention to adapt the system of Stippler to use any antennas that complete a receiver/transmitter pair in order to make the necessary measurements in order to evaluate a redirection

response because one skilled in the art can easily recognize the equivalence of using one-half of two communication channels vs. both halves of one communication channel.

In reference to claim 2, Stippler teaches that a predetermined value is assigned to a redirection indicator in dependence on the result of the comparison (decision block $X=Y?$ is a redirection indicator).

In reference to claim 11, Stippler teaches that response signal must be decoded/decrypted implying that amplitude is transmitted in encoded form (Col 4, lines 30-37).

In reference to claim 16, Stippler teaches that method is used for detecting unauthorized redirection of an authentication process employed in motor vehicles (Abstract).

Claims 12, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stippler in view of Applicant's admitted prior art.

In reference to claim 12, Stippler does not teach that the comparison has to be carried out within a predefined time window that begins at the transmission of the interrogation signal.

Applicant's admitted prior art, DE 19827722 suggests that if the difference between the interrogation and the reply signals is greater than the predefined minimum time, then it is assumed that redirection has occurred and the authentication process is terminated, thus implying a predefined time window that begins at the transmission of the interrogation signal (Page 2, second paragraph).

It would have been obvious to one skilled in the art at the time of invention to use a predefined time window to determine if redirection was occurring because applicant's admitted prior art suggests that monitoring for additional time delays that ensue between reception and transmission of the replies signals is a good way to determine if redirection has occurred (Page 2, second paragraph).

In reference to claim 13 and 15, Stippler does not teach that the first transmitting and receiving unit compares the frequency of the interrogation signal with the frequency of the reply signal.

Applicants admitted prior art, DE10005503 suggests that the first transmitting and receiving unit compares the frequency of the interrogation signal with the frequency of the reply signal (Page 1, third paragraph - Page 2, first paragraph).

It would have been obvious to one skilled in the art at the time of invention to additionally compare interrogation and reply signal frequencies because applicant's admitted prior art suggests that by comparing interrogation and reply signal frequencies one can exclude the possibility that redirection has occurred. It would have obvious where necessary to simultaneously perform both checks because a reduction in the time required in providing access to the device further limits redirection efforts.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stippler in view of Applicant's admitted prior art further in view of Bosch.

In reference to claim 14, Stippler and Applicant's admitted prior art does not teach that a check is made by the first transmitting and receiving unit as to whether the

carrier frequency is present, without interruption, from the transmission of the interrogation signal until the reception of the power signal.

Bosch suggests using tone protection to prevent a relay station attack by sending a continuous tone and monitoring the tone (Page 11).

It would have been obvious to one skilled in the art at the time of invention to combine the teachings of Stippler, Applicant's admitted prior art and the suggestions of Bosch in order to allow the system of Stippler and Applicant's admitted prior art to further determine if a redirection attack was attempted because Bosch suggests that addition of the tone checking can prevent relay station attacks (Page 11).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alrabady et al. (heretofore Alrabady, IEEE Transactions on vehicular technology, Vol. 52, No 2, March 2003) suggests how transmitting the tone protects against a relay attack. When the thieves try to amplify the signal for redirection purposes, some harmonics will be generated that fall in the band of the two tones thus corrupting the signal (Page 433, Col 1, *Corrupting the Signal*).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas L Linnenkamp whose telephone number is (703) 305-8701. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on (703) 305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NLL

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
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